## REMARKS

Claims 1-15 are currently pending in the application. By this amendment, claim 1 is amended and claims 3-15 are added for the Examiner's consideration. The amended and added claims do not add new matter and are fully supported by the specification. For example, support for the amended claim 1 is provided at page 11 of the specification, and the added claims finds support at pages 8-11 of the specification. Reconsideration of the rejected claims in view of the above amendments and following remarks is respectfully requested.

***35 U.S.C. §103 Rejection***

Claims 1 and 2 were rejected under 35 U.S.C. §103(a) over U. S. Patent No. 6,402,260 to Kobayashi *et al.* in view of U. S. Patent No. 5,295,737 to Epple *et al.* This rejection is respectfully traversed.

*Invention*

The invention relates to a brake hydraulic pressure controller for a vehicle comprising a pump for refluxing a brake fluid to a master cylinder, an electric motor which operates to drive the pump by way of power supply from a battery, and a control unit for controlling an energization amount to the electric motor by using an energization duty factor predetermined in accordance with the voltage of the battery. In one aspect of the invention, the control unit keeps the energization duty factor to the electric motor at 100% until a predetermined time elapses,

irregardless of the voltage. Thereafter, the control unit executes control of the energization duty factor in accordance with the voltage of the battery.

With this configuration, from when the electric motor is started to when the predetermined time elapses, the energization duty factor of the electric motor is 100% irrespective of the battery voltage. Thus it is possible to prevent a start delay of the electric motor by ensuring that a necessary start torque is obtained. When the electric motor reaches a steady rotation by the elapse of the predetermined time, the energization amount to the electric motor is controlled by using the duty factor in accordance with the battery voltage, which prevents the rotation speeds of the electric motor and the pumps from becoming higher than necessary thus reducing the operation sound and saving power consumption.

*Rejection of Claims 1 and 2*

Kobayashi discloses a vehicle anti-lock brake control system. In this system, as described at col. 2, the electric motor and the pumps are caused to rotate at a set rotation speed. However, Kobayashi discloses, at col. 5, lines 41 to 50, that a duty ratio determining unit bases a determination of the energization of the motor on a memorized set rotational speed and the voltage. Specifically, this passage discloses, in part,

> A voltage applied from the battery 18 to the electric motor 12 is detected by a voltage detecting unit 20, and an applied voltage detected by the voltage detecting unit 20 is inputted into the duty ratio determining unit 22. Namely, inputted into the duty ratio determining unit 22 are the set rotational speed memorized in the

> memory unit 21 and the applied voltage detected at the voltage detecting unit 20. The duty ratio determining unit 22 determines in response to the applied voltage an energizing duty ratio for energizing the electric motor 12 so that the electric motor 12 rotates at the set rotational speed.
> (Emphasis Added)

Similarly, a second embodiment, starting at col. 6, line 64, describes the use of the applied voltage in determining the energizing duty factor.

Accordingly, Kobayashi does not teach a control unit keeping the energization duty factor, irregardless of the voltage. Instead, it would appear that Kobayshi uses the voltage in such a determination, opposite to that of the claimed invention. Applicants also agree with the Examiner that Kobayashi does not teach the energization duty factor being held at 100% until a predetermined time elapses.

Epple does not compensate for the deficiencies of Kobayashi. Epple shows a circuit which is driven by an electric motor 2. The circuit includes a limit value adapter 3 which produces the limit value adaptation for a noninverting input +E of a current regulator 4. The current regulator 4 controls a power amplifier 5 so that an increase of potential $V_{AD}$ at the input +E results also in an increase of potential at the controller output A and the motor current increases. The electrical current is converted by a current measuring device 6 to a proportional real-level voltage $V_R$ and is delivered to the inverting input -E of the current regulator 4. The working point of the circuit is the equality of the potential of the two signals $V_{AD}$ and $V_R$. As

described with reference to FIG. 3, when the pump is turned on, a signal reaches a terminal 9, so that a block 9a then produces a pulse with the amplitude $\Delta V_{LIM}$ and a pulse width $\Delta t$; this pulse is superimposed on the limit voltage $V_{LIM}$ in the adder 10 and the sum serves as the limit voltage during the period $\Delta t$ (see FIG. 5). Accordingly, the use of the voltage makes an important part of the Epple system.

Accordingly, Applicants respectfully request that the rejection over claims 1 and 2 be withdrawn.

***Other Matters***

Claims 3-15 are added for the Examiner's further consideration. Support for the added claims is found at least at pages 8-11 of the specification.

Claims 3-9 are dependent claims, depending from distinguishable base claim 1. Accordingly, claims 3-9 are also distinguishable claims.

Claim 10 is a new independent claim. Claim 10 recites the control unit includes a switching device and a processing unit. The processing unit controls conduction/interruption of the switching device via a booster circuit for boosting a voltage. The control unit keeps an energization duty factor to the electric motor at 100% from a start time to a predetermined elapsed time, irrespective of the voltage. Claims 11-15 are dependent claims, depending from distinguishable base claim 10. The features of these claims are not shown in the art of record.

## CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 23-1951.

Respectfully submitted,

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